

**APPLICATION**  
**FOR**  
**UNITED STATES LETTERS PATENT**

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TITLE                  SYSTEM AND METHOD FOR  
                             SYNCHRONIZING LEDGER  
                             ACCOUNTS BY COMPANY GROUP

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**INTERNATIONAL BUSINESS MACHINES CORPORATION**

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**SYSTEM AND METHOD FOR SYNCHRONIZING LEDGER ACCOUNTS BY  
COMPANY GROUP**

**Background of the Invention**

Cross References to Related Applications

5           The following U.S. patent applications, filed  
concurrently or otherwise copending, are assigned to the  
assignee hereof and contain subject matter related, in  
certain respect, to the subject matter of the present  
application.

10       Serial No. 09/657,215, filed 7 Sep 2000, entitled "System and  
Method for Clustering Servers for Performance and Load  
Balancing", assignee docket END9-2000-0104-US1;

15       Serial No. 09/657,216, filed 7 Sep 2000, entitled "System  
and Method for Front End Business Logic and Validation",  
assignee docket END9-2000-0105-US1;

Serial No. 09/657,217, filed 7 Sep 2000, entitled "System  
and Method for Data Transfer With Respect to External  
Applications", assignee docket END9-2000-0106-US1;

Serial No. 09/656,037, filed 7 Sep 2000, entitled "System and Method for Providing a Relational Database Backend", assignee docket END9-2000-0107-US1;

Serial No. 09/656,803, filed 7 Sep 2000, entitled "System and Method for Providing a Role Table GUI via Company Group", assignee docket END9-2000-0108-US1;

Serial No. 09/656,967, filed 7 Sep 2000, entitled "System and Method for Populating HTML Forms Using Relational Database Agents", assignee docket END9-2000-0109-US1;

Serial No. 09/657,196, filed 7 Sep 2000, entitled "System and Method for Catalog Administration Using Supplier Provided Flat Files", assignee docket END9-2000-0110-US1; and

Serial No. 09/657,195, filed 7 Sep 2000, entitled "System and Method for Providing an Application Navigator Client Menu Side Bar", assignee docket END9-2000-0111-US1.

Serial No. 09/\_\_\_\_\_, entitled "SYSTEM AND METHOD FOR AUTOMATING INVOICE PROCESSING WITH POSITIVE CONFIRMATION", assignee docket number END9 2000 0165 US1.

Serial No. 09/\_\_\_\_\_, entitled "SYSTEM AND METHOD FOR  
GENERATING A COMPANY GROUP USER PROFILE", assignee docket  
number END9 2000 0166 US1.

5 Serial No. 09/\_\_\_\_\_, entitled "SYSTEM AND METHOD FOR  
SHARING DATA ACROSS FRAMES USING ENVIRONMENT VARIABLES ",  
assignee docket number END9 2000 0167 US1.

Serial No. 09/\_\_\_\_\_, entitled "SYSTEM AND METHOD FOR  
GROUPING COMPANIES ACCORDING TO ACCOUNTING SYSTEM OR RULES",  
assignee docket number END9 2000 0169 US1.

10 Serial No. 09/\_\_\_\_\_, entitled "SYSTEM AND METHOD FOR FRAME  
STORAGE OF EXECUTABLE CODE", assignee docket number END9  
2000 0174 US1.

15 Serial No. 09/\_\_\_\_\_, entitled "SYSTEM AND METHOD FOR  
INVOICE IMAGING THROUGH NEGATIVE CONFIRMATION PROCESS",  
assignee docket number END9 2000 0175 US1.

Serial No. 09/\_\_\_\_\_, entitled "SYSTEM AND METHOD FOR  
LEVERAGING PROCUREMENT ACROSS COMPANIES AND COMPANY GROUPS",  
assignee docket number END9 2000 0176 US1.

Serial No. 09/\_\_\_\_\_, entitled "SYSTEM AND METHOD FOR  
END9 2000 0168 US1

PROCESSING TAX CODES BY COMPANY GROUP", assignee docket  
number END9 2000 0177 US1.

Serial No. 09/\_\_\_\_\_, filed 2 March 2001, entitled "SYSTEM  
AND METHOD FOR MANAGING INTERNET TRADING NETWORKS", assignee  
5 docket number END9 2000 0178 US1.

The above-identified patent applications are incorporated  
herein by reference.

#### Technical Field of the Invention

10 This invention pertains to accounting and procurement  
systems. More particularly, it relates to synchronizing  
ledger accounts by company group between a front-end  
requisition and catalog system and a back-end accounting and  
procurement system.

#### Background Art

15 There is a need in the art for a system and method for  
keeping ledger accounts in synchronization between a back-  
end procurement system and a front-end requisition and  
catalog system.

In such a system, the same general ledger accounts must exist in each system. This is typically solved by daily bridging of accounts from the back-end procurement system to the front-end requisition and catalog system.

5           However, maintaining such synchronization when implemented for many different customer companies by an enterprise providing procurement services to these customer companies is complex and time consuming, often involving manual updating of a vast number of commodity documents  
10       describing the commodities available to customers entering requisitions. There is, therefore, a need for a much simplified and automatic synchronization process.

          It is an object of the invention to provide an improved system and method for synchronizing ledger accounts between  
15       a back-end procurement system and a front-end requisition and catalog system.

          It is a further object of the invention to provide a system and method for synchronizing such ledger accounts in  
20       an enterprise on behalf of a large number of customer companies.

## Summary of the Invention

A system and method for keeping ledger accounts in synchronization between a back-end procurement system and a front-end requisition and catalog system. An extract utility extracts a file of general ledger (G/L) accounts, including account code, description, and company code, from a chart of accounts in the back-end and transfers it to the front-end, where it is updated by an update utility to include company group code from a company group table and then loaded into a data store of valid general ledger accounts. Maintenance of the front end data store of valid accounts includes pushing to all companies in a company group code entered with respect to one of the companies in that group.

In accordance with an aspect of the invention, there is provided a computer program product configured to be operable for maintaining ledger accounts in synchronization between a back-end procurement system and a front-end requisition and catalog system where they are associated by company group code.

Other features and advantages of this invention will

become apparent from the following detailed description of the presently preferred embodiment of the invention, taken in conjunction with the accompanying drawings.

### **Brief Description of the Drawings**

5           Figure 1 is a high level system diagram illustrating an enterprise system for providing procurement services with respect to a plurality of vendors on behalf of a plurality of company groups of related customer companies in accordance with the preferred embodiment of the invention.

10           Figure 2 is a diagram illustrating the extract and update utilities of the preferred embodiment of the invention for synchronizing the chart of accounts by company group code across front-end and back-end systems.

15           Figure 3 is a diagram illustrating the generation of a data store of valid accounts.

            Figure 4 is a diagram illustrating the generation of a drop down list of account code/description data.



## Best Mode for Carrying Out the Invention

Referring to Figure 1, the procurement services organization of an enterprise 244 provides procurement services to a plurality of companies 248, 249 organized in a plurality of company groups 241-243 with respect to a plurality of vendors 245-247.

Referring to Figures 2 and 3, in accordance with a preferred embodiment of the invention, a system and method is provided for keeping ledger accounts in synchronization between a back-end procurement system 42, a procurement system, such as SAP, and a front-end requisition and catalog system 40, such as the IBM requisition and catalog system referred to as Req/Cat Web. Company grouping codes are applied to general ledger accounts (GL) bridged from SAP to Req/Cat Web (RCW).

In an exemplary embodiment of the invention, an enterprise resource planning system 42, known as SAP, is used as the procurement engine and accounts payable system for an enterprise, such as IBM, which provides procurement services for a plurality of customer companies 248.

REQ/CAT Web (RCW) 40 is a requisition system implemented on a company intranet.

In accordance with the preferred embodiment of the invention a bridge generally comprising an extract utility 258 and an update utility 250 is provided to extract a file of general ledger (G/L) accounts 49, including account code 260, description 262, and company code 248, from a chart of accounts 252 in SAP 42 and transfer it to RCW 40, where it is updated by utility 250 to associate company group code 253 from company group table 251 and then loaded into a data store 254 of valid general ledger accounts. This association of company group code 253 to company 248 may be by physically including field 253 in the data store 254 record, or logically by referencing company group table 251 by company code 248 to obtain company group code 253.

Referring to Figure 3, the bridge and store are maintained at a company level.

The chart of accounts (also referred to as the general ledger) is combined by company groups in data store 254 for means of access and data integrity.

Referring to Figure 4, a procurement administrator

interfaces with RCW 40 to provide for each company commodity  
code a company commodity document describing in detail the  
commodity. This commodity document is used in association  
with a company group association table 272 to generate a  
5 drop down list of valid accounts for use by customer  
requester 46 in preparing a requisition. Associated with  
each commodity code 268 are one or more purchasing types,  
such as expense, capital, external (resale), unallowable and  
allowable buys. Company group association table 272 is  
10 provided for associating commodity codes 268 with general  
ledger account codes 276 from data store 254. Those account  
codes 276 corresponding to commodity codes 268 for buy type  
270 and company group 242 from table 251 for the company 249  
of this customer requestor 46 are presented in drop down  
15 list 280 as account codes 278 and description 282.

When updating the company group association table, the  
addition or change of a commodity code 274/account code 276  
association entered on behalf a company 249 is pushed to all  
other companies 248 in the company group 242.

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#### **Advantages over the Prior Art**

It is an advantage of the invention that there is provided an improved system and method for synchronizing ledger accounts between a back-end procurement system and a front-end requisition and catalog system.

5           It is a further advantage of the invention that there is provided a system and method for synchronizing such ledger accounts in an enterprise on behalf of a large number of customer companies.

#### **Alternative Embodiments**

10           It will be appreciated that, although specific embodiments of the invention have been described herein for purposes of illustration, various modifications may be made without departing from the spirit and scope of the invention. In particular, it is within the scope of the  
15           invention to provide a computer program product or program element, or a program storage or memory device such as a solid or fluid transmission medium, magnetic or optical wire, tape or disc, or the like, for storing signals readable by a machine, for controlling the operation of a  
20           computer according to the method of the invention and/or to

structure its components in accordance with the system of the invention.

Further, each step of the method may be executed on any  
5 general computer, such as an IBM System 390, AS/400, PC or  
the like and pursuant to one or more, or a part of one or  
more, program elements, modules or objects generated from  
any programming language, such as C++, Java Script, Java,  
Pl/1, Fortran or the like. And still further, each said  
10 step, or a file or object or the like implementing each said  
step, may be executed by special purpose hardware or a  
circuit module designed for that purpose.

Accordingly, the scope of protection of this invention  
15 is limited only by the following claims and their  
equivalents.